

Finger Joint Jewelry Box

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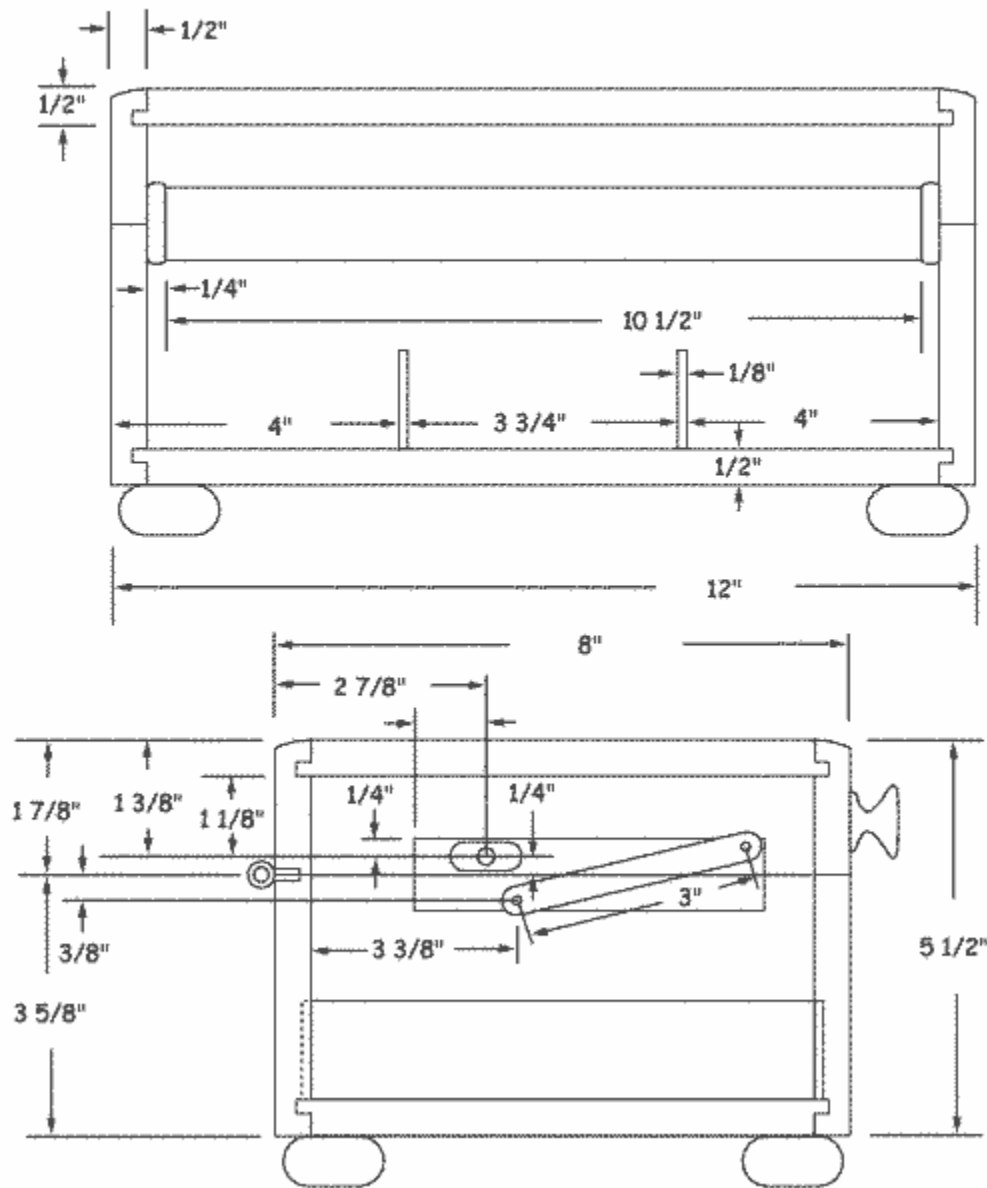
Here's a jewelry box with a bit of a twist, a shelf that rises with the lid. I designed the shelf and lid this way because a removable shelf seemed clumsy since you have to find somewhere to set it down. Also, this design allowed me to locate the shelf so that it functions as a stop to hold the lid open. Making parts with the right geometry so that the shelf and lid work properly is really not that hard. It helps to have a drill press so that you can accurately locate the pivot holes that

suspend the shelf, but you could align the holes by hand and get a working result.



Finger joints require careful attention but are not as difficult as you might think, and are very attractive when used with woods of contrasting colors. I used myrtle and acacia, but black walnut matched with bird's eye maple would be a good combination. Highly figured wood is put to best use in small boxes; it makes a visual jewel out of a container for jewels.

Finger Joint Jewelry Box



Cut out list- Finger Joint Jewelry Box

- 2- 1/2 x 3 5/8 x 12 lower front and rear
- 2- 1/2 x 3 5/8 x 8 lower sides
- 2- 1/2 x 1 7/8 x 12 lid front and rear
- 2- 1/2 x 1 7/8 x 8 lid sides
- 2- 1/2 x 7 1/4 x 11 1/4 top and bottom
- 2- 1/8 x 1 3/8 x 7 1/4 lower dividers
- 2- 1/2 x 7/8 x 10 1/2 shelf front and rear

2- 1/2 x 7/8 x 5 1/2 shelf sides
 1- 1/8 x 5 1/2 x 10 1/2 shelf bottom
 4- 1/8 x 7/8 x 4 3/4 shelf dividers
 2- 1/8 x 7/8 x 7 5/8 shelf dividers
 1- 1/2 x 2 x 4 1/2 ring insert
 2- 1/4 x 1/2 x 1 shelf hinge spacers
 2- 1/4 x 3/8 x 3 1/2 levers
 Feet, at whatever chosen configuration
 1/8" dowels, 1/4" dowels

Resources For Building A Finger Joint Jewelry Box

[Lathes](#) | [Clamps](#) | [Drill Bits](#) | [Drill Presses](#) | [Glue](#) | [Miter Gauges](#) | [Routers](#) | [Router Bits](#) | [Router Tables](#) | [Table Saws](#)

The first step on this project, after cutting out all your parts according to the list, is to cut all the finger joints. See the article on this site titled Finger Joints for an explanation of this procedure. Note that you should begin cutting each joint for the outer sides (other than the shelf) on the edge where the lid and lower box meet. By so doing the finger joints at the meeting of box and lid will not have any half-fingers.



Photo 1- To cut grooves in the box sides for the top and bottom, set up on the router table with fence and stops as shown. Lower the part onto the bit, keeping your fingers away from the bit.

For router tables, [click here](#).
 For routers, [click here](#).



After the finger joints, cut grooves into the box sides, fronts, and rears for the top and bottom. These grooves must be stopped at the finger joints or else there will be voids visible in the fingers from the outside. Set up on a router table with a fence and stop blocks located at either end of the fence to locate the ends of the grooves as in photos 1 and 2. Put a 3/16" diameter straight flute bit in the router and raise it to 1/8" above the table. Set

**3/4 HP Lever
Release 690
Router**

The PC 690 line
routers are
standard
woodshop
workhorses.

the fence 1/2" from the outside of the bit. With the part butted against one of the stop blocks slowly drop the part down onto the cutter while holding the part against the fence. Push it along the fence to complete the cut, then lift it away from the cutter. Cut the dados for the partitions in the bottom of the box in a similar way. While making these cuts keep your fingers as far from the bit as you can, and never pass your fingers directly over the bit, even though it is covered by wood.



**Rockler Bench
Top Router
Table**

Mount your
router into this
economical unit.



Photo 2- Push the part along the fence until it hits the opposite stop, then lift the part away from the bit, again, with your fingers away from the bit.

Once the grooves are done, cut tongues around the perimeter of the top and bottom with two setups at the table saw, as in photo 3. First run the parts face down to make the shoulder of the tongue, then run them on edge as in the photo to establish the thickness of the tongue, which should be a slip fit in the groove. Make the top and bottom 1/16" less in width than the space in which they will fit, so that they can expand a bit with moisture variations and not be constricted by the frames in which they are held.

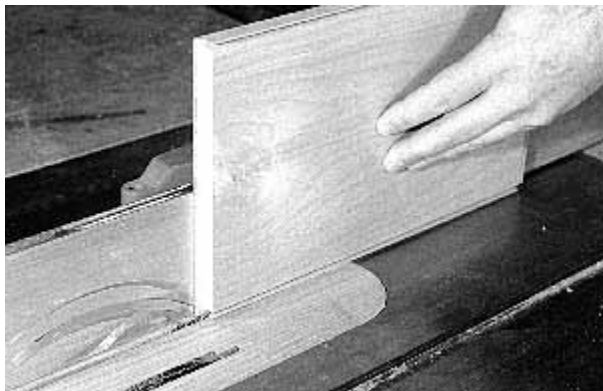


Photo 3- Cut a tongue onto the edge of the box top and bottom at the table saw. The tongue should fit the groove in the sides with a fit that is not very tight, but not loose so that it rattles.

For table saws, [click here.](#)

It is important that the pivot points for the shelf and its levers be carefully

located on both sides, otherwise the shelf could bind as it is closed. Locate these holes on a drill press if possible. Bore the 1/4" holes in the lid sides and shelf sides as in photo 4. Use a similar setup to bore the holes for the lever screws in the lower box sides. Pre-test a screw in a hole drilled by the bit you use here to be sure it is the right size. But don't drill the lever screw holes in the shelf sides yet. This will be done after the box is assembled to assure a location that will not cause binding.


Brad Point Bits
[Buy a set of 7 or individual bits.](#)

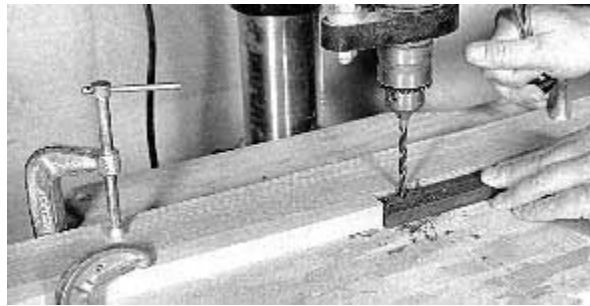


Photo 4- Set up at the drill press with a fence and stop block as shown to locate the holes in the shelf and box sides that will hold the shelf to the lid and levers.

For drill presses, [click here.](#)
For drill bits, [click here.](#)

Note that the 1/4" holes locate the shelf such that when the lid is opened to a full vertical position the shelf contacts the inside of the lid top and holds it open. The distance from the 1/4" dowel center to the inside of the box top must be 1/8" greater than the distance between this center and the top rear of the shelf. Since the dowel center is at the top of the shelf side, the shelf bottom rear is far enough away from the dowel that it will contact the top.


Tapered Drill Bits With Countersinks



Photo 5- Use a similar setup at the drill press for the levers. Countersink these holes so the screw heads will be recessed behind the face of the levers.

Bore holes in the levers for screws as in photo 5, and countersink the holes so that the screw heads will be recessed behind the face of the lever. Note that you need countersinks on opposite faces of the levers since the



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screws go in opposite directions. Make the distance between the hole centers 3".



[**Toggle Clamps**](#)
[Various sizes and
configurations](#)



Photo 6- Safely cut slots in small parts, such as the shelf dividers, by holding them to a jig with a toggle clamp as they are cut.



[**Sure Lock Miter
Gauge**](#)
[With fence and
flip stop.](#)

For toggle clamps, [click here.](#)

Make the dividers in the shelf from stock the same thickness as the blade kerf that you use to cut their slots. Plane the stock to match, or rip it out at the table saw. Use the setup shown in photo 6 to safely cut the slots. Use a toggle clamp to hold short parts, not your fingers. Clamp a stop block to the fence as shown to establish the distance of each slot from the part end. The parts fit together as in photo 7. If you wish, cut shallow dados on the inside of the shelf sides for the dividers to fit in. Or, eliminate these and cut the dividers just long enough to fit inside the shelf with no dados.

[**Delta Miter Jig**](#)
[Rigid, precise
tool.](#)



[Bed Set](#)

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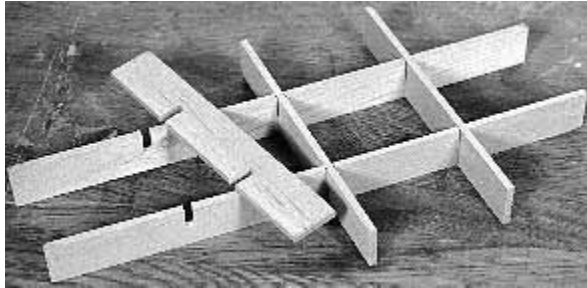


Photo 7- Fit the internal dividers together with overlapping slots as shown.

For the ring holder on the left side of the shelf, start with a piece $1/2" \times 4 1/2" \times 12"$, and cut the ring slots along the grain on the table saw with the blade raised to $3/8"$. Then cut a piece $1 7/8"$ long from this piece. If you are making only one box this is very wasteful, but it is far safer than trying to cut slots into a piece that starts so small.

Glue up the parts, checking to be sure that both lid and lower box are square. Don't glue in the top and bottom, and take pains to see to it that glue doesn't squeeze from the finger joints into the dadoes for these. Once again this is to avoid restricting moisture related movement.

After the glue is set, bore $1/8"$ holes $1/2"$ deep at the top and bottom of the finger joints, glue and insert $1/8"$ dowels. These pins are just for looks (don't bother with them if you like), the glue is more than enough to hold the joints together. Then you are ready for sanding and installing the lid hinges.

I turned the box feet on the lathe as in photo 8, then cut each one out on the band saw. Square feet of any design would make a good substitute if you haven't access to a lathe. Mine were screwed to the bottom from inside the lower box; this should be done before the shelf is installed.



[Buck Bros. Turning Tool](#)



Photo 8- I'm not very good with a skew on the lathe, so I do turning like this the safe way by using the tool to scrape rather than cut. The difference is that, when

scraping, the tool edge is at about 90o to the work,

[Set](#)

rather than turned into it to take a slice. Slicing produces a smoother cut, but it's hard to control and can kick back at you. Always wear a face mask when turning.

Wood Tips

To see another tip- hit "Refresh" or "F5"

#29- TWO SMOOTH AND PARALLEL EDGES AT THE JOINTER. To produce clean, straight edges on both long edges of boards, first joint one edge straight, then rip to width on the table saw, but rip out the part over-width about 1/32" or so. Then clean up this last bit on the jointer, bringing the piece to proper width with a clean edge.

For lathes, [click here](#).

Make the bottom plate on the shelf from a piece of solid stock 1/8" x 5 1/2" x 10 1/2" (or 1/8" plywood), and secure it with round-head screws and washers. Bore the holes in the plate far larger than the shank of the screws, and use washers large enough to cover the holes. Again, this is to accommodate moisture related movement.

Make and glue the two small spacers onto the shelf sides, lining up the holes. Install the levers onto the lower box with screws into the pre-drilled holes, and then install the shelf into the lid by inserting the dowels through the shelf holes into the lid holes. Next drill one of the lever holes into one side of the shelf at 3 1/2" from the dowel hole center and midway vertically on the shelf. Install this screw. To locate the other shelf lever screw hole, hold the lid just open so that you can see the shelf side, and hold the unattached lever up to the shelf with a small nail through the screw hole. Scribe a small arc along the midsection of the shelf with the nail. Open the lid, measure up from the bottom of the shelf onto the arc the same height as the hole on the other side. Bore here for the lever screw hole, install the screw and you're ready for a touch-up sanding and the finish.